

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: P196418

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196418  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-5NQ-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7979.2 lumens  
Efficiency: N/A  
Efficacy: 120.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

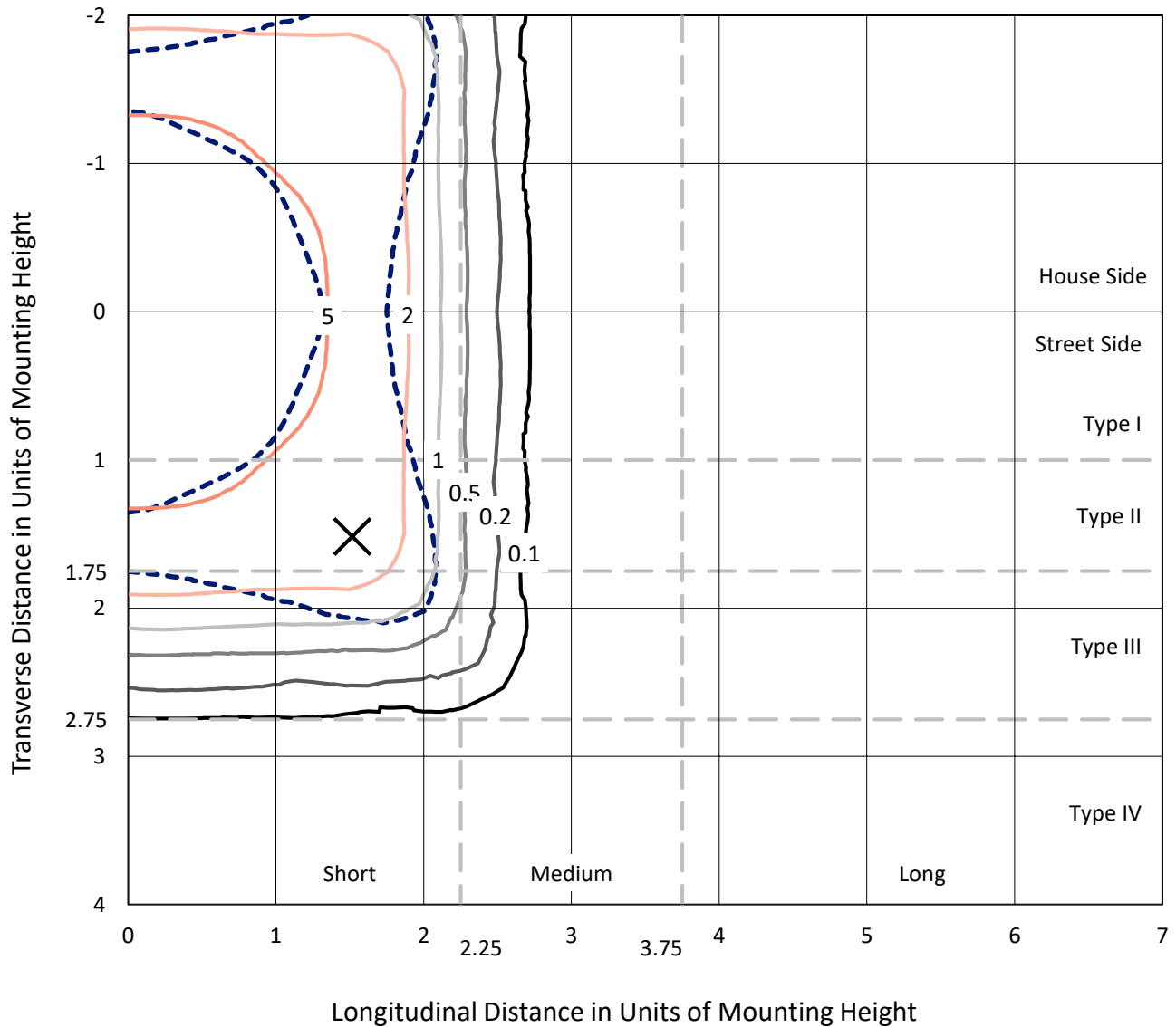
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

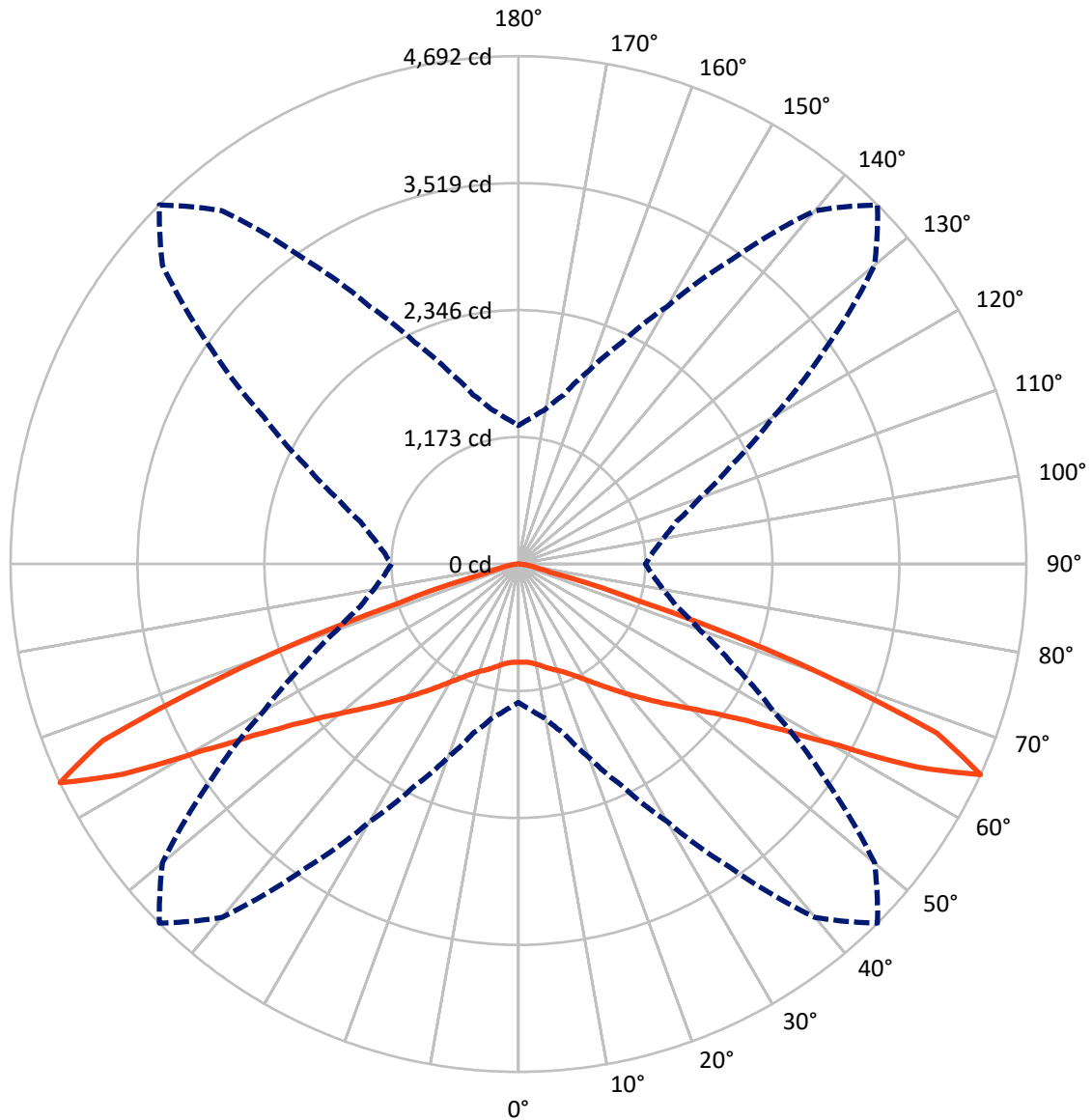
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.1 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3989.6	0.0	3989.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3989.6	0.0	3989.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	7979.2	0.0	7979.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.4	1.1
10°-20°	283.3	3.6
20°-30°	528.4	6.6
30°-40°	891.0	11.2
40°-50°	1447.3	18.1
50°-60°	2267.7	28.4
60°-70°	2140.6	26.8
70°-80°	288.5	3.6
80°-90°	43.9	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	7979.2	100.0
0°-180°	7979.2	100.0



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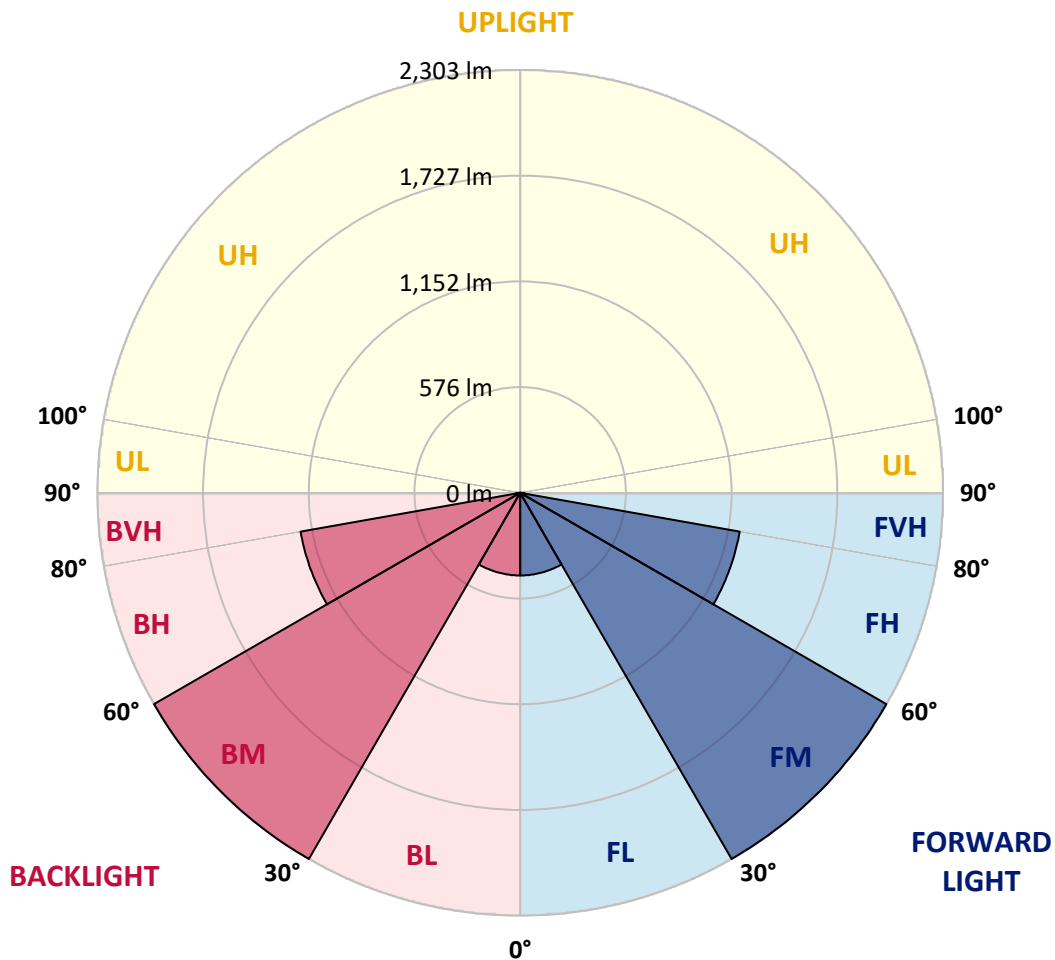
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	450.1	5.6			
FM	(30°-60°)	2303.0	28.9			
FH	(60°-80°)	1214.5	15.2			G1/1800
FVH	(80°-90°)	22.0	0.3			G1/100
BL	(0°-30°)	450.1	5.6	B1/500		
BM	(30°-60°)	2303.0	28.9	B2/2500		
BH	(60°-80°)	1214.5	15.2	B3/2500		G1/1800
BVH	(80°-90°)	22.0	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	907.6	907.6	907.6	907.6	907.6	907.6	907.6	907.6	907.6	907.6	907.6
2.5°	915.0	915.0	916.5	916.0	914.1	912.7	911.1	909.1	908.2	907.2	906.7
5°	920.1	920.1	921.5	921.0	919.5	917.6	916.5	915.0	913.6	912.7	913.1
7.5°	932.5	933.0	933.5	933.0	931.4	930.1	928.0	927.5	925.5	924.0	925.0
10°	951.3	951.3	951.8	952.4	951.3	948.0	948.0	946.8	944.9	942.9	943.5
12.5°	972.2	972.2	972.7	972.7	972.7	970.8	971.2	970.8	968.2	967.3	968.2
15°	992.6	993.1	993.1	994.1	994.1	994.6	996.6	996.6	995.6	995.2	995.2
17.5°	1016.4	1017.4	1018.0	1019.5	1019.9	1020.9	1023.0	1023.4	1024.0	1022.4	1023.0
20°	1048.4	1048.8	1050.3	1050.7	1052.7	1052.7	1053.8	1053.3	1052.2	1050.3	1050.3
22.5°	1084.1	1085.1	1088.0	1088.0	1090.5	1089.1	1089.6	1088.0	1085.6	1084.6	1083.7
25°	1130.9	1132.3	1134.7	1133.8	1134.7	1132.3	1132.3	1132.3	1130.9	1129.3	1128.8
27.5°	1190.0	1187.4	1190.0	1187.9	1187.4	1185.5	1186.0	1185.0	1183.5	1183.0	1181.0
30°	1251.6	1248.7	1250.2	1250.6	1249.6	1249.1	1247.0	1245.7	1243.2	1243.6	1242.2
32.5°	1322.1	1319.2	1320.7	1321.2	1320.2	1321.2	1320.7	1317.2	1314.2	1316.2	1316.2
35°	1406.1	1404.2	1408.2	1409.7	1406.7	1405.2	1403.2	1399.2	1394.7	1397.8	1398.2
37.5°	1507.1	1504.6	1507.6	1511.6	1506.0	1503.1	1495.1	1489.2	1486.2	1487.7	1489.6
40°	1611.9	1612.4	1620.9	1621.9	1616.0	1612.4	1604.5	1595.5	1587.1	1587.1	1589.6
42.5°	1722.3	1723.8	1733.7	1737.2	1735.2	1728.8	1717.8	1706.8	1695.9	1698.0	1700.9
45°	1847.0	1845.1	1855.5	1864.0	1862.5	1860.4	1850.1	1830.2	1820.3	1819.7	1824.7
47.5°	1978.2	1982.3	1993.2	2007.6	2007.1	2002.1	1988.7	1970.4	1951.9	1953.4	1959.3
50°	2131.4	2136.9	2155.2	2169.7	2171.6	2170.1	2154.3	2132.8	2107.1	2108.4	2116.5
52.5°	2268.5	2276.5	2297.9	2327.8	2346.2	2354.5	2344.1	2324.3	2297.9	2299.4	2307.9
55°	2392.8	2405.3	2437.0	2477.8	2514.6	2548.9	2564.4	2563.8	2544.4	2548.9	2559.8
57.5°	2470.9	2488.3	2536.5	2602.1	2675.1	2744.3	2803.9	2860.1	2872.5	2895.8	2895.8
60°	2366.0	2406.8	2470.9	2583.2	2726.9	2881.9	3050.0	3213.5	3318.9	3401.9	3357.1
62.5°	1975.9	2035.9	2125.8	2274.0	2497.6	2774.5	3112.0	3492.4	3889.0	4131.5	3953.5
65°	1278.5	1353.9	1451.9	1618.4	1900.2	2256.6	2748.2	3431.8	4261.7	4692.2	4294.6
67.5°	506.5	557.7	617.4	735.7	980.2	1330.1	1881.9	2724.8	3763.2	4169.4	3723.4
70°	242.1	250.5	261.9	287.4	348.4	470.3	756.1	1342.6	2307.9	2735.9	2252.7
72.5°	175.0	176.5	181.9	190.3	208.2	233.2	283.3	410.6	795.7	1157.2	796.8
75°	132.8	134.7	137.6	142.1	151.7	163.6	182.5	218.7	272.4	314.1	271.8
77.5°	100.9	102.9	105.3	109.8	114.8	123.3	130.2	144.7	167.5	176.5	175.5
80°	73.5	77.0	81.1	85.0	88.5	92.5	93.0	99.9	112.9	121.3	118.8
82.5°	46.8	49.7	60.1	64.6	65.1	66.1	65.7	66.1	73.1	79.0	77.0
85°	29.8	31.8	37.2	42.3	41.3	43.2	43.2	42.3	39.3	33.8	40.2
87.5°	14.9	15.4	17.9	22.4	21.5	18.9	18.3	18.3	13.4	11.5	12.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	907.6	907.6	907.6	907.6	907.6	907.6	907.6	907.6
2.5°	905.1	906.1	904.6	904.6	904.1	905.1	903.7	903.7
5°	912.1	913.6	913.1	913.1	914.1	915.0	914.6	914.1
7.5°	924.6	925.5	926.5	926.9	928.0	927.5	928.4	928.0
10°	943.5	942.5	943.9	942.5	942.9	942.0	942.5	942.5
12.5°	967.3	965.8	964.8	963.7	963.7	961.8	961.8	962.3
15°	994.6	992.1	990.1	989.2	988.1	988.1	986.6	987.7
17.5°	1021.5	1019.0	1015.4	1015.4	1014.0	1013.1	1012.0	1014.5
20°	1049.8	1047.2	1045.3	1044.8	1041.8	1040.8	1041.4	1044.3
22.5°	1082.5	1081.1	1081.1	1080.1	1078.1	1076.6	1076.6	1080.1
25°	1126.8	1123.8	1124.4	1124.9	1123.8	1123.8	1122.8	1125.4
27.5°	1181.0	1178.5	1180.0	1181.0	1180.0	1181.5	1180.0	1181.9
30°	1244.7	1243.2	1244.7	1246.1	1243.6	1243.6	1242.6	1244.1
32.5°	1320.7	1318.6	1319.7	1319.7	1316.2	1313.2	1309.3	1312.2
35°	1404.2	1401.7	1403.7	1405.2	1401.2	1398.2	1392.3	1394.7
37.5°	1496.1	1497.2	1499.6	1506.0	1505.0	1500.1	1495.6	1497.6
40°	1599.0	1604.0	1615.0	1619.4	1618.4	1613.4	1607.5	1608.6
42.5°	1715.4	1721.8	1733.3	1740.7	1737.2	1730.2	1722.8	1725.7
45°	1842.1	1852.1	1866.9	1874.5	1870.0	1862.5	1852.1	1857.5
47.5°	1976.3	1996.1	2016.1	2026.0	2024.5	2014.0	2000.6	2002.1
50°	2136.9	2163.3	2188.6	2198.6	2190.9	2175.2	2156.2	2155.6
52.5°	2336.6	2365.0	2385.9	2383.4	2365.0	2340.2	2318.8	2317.8
55°	2586.1	2595.7	2592.6	2571.3	2538.9	2500.2	2472.9	2468.3
57.5°	2887.9	2856.0	2809.4	2744.7	2672.2	2598.6	2548.9	2530.6
60°	3256.7	3113.1	2946.0	2770.0	2609.5	2489.3	2413.2	2367.0
62.5°	3561.5	3145.3	2772.1	2466.4	2216.4	2067.7	1963.8	1899.8
65°	3457.1	2717.4	2176.7	1782.4	1509.5	1356.0	1246.1	1173.0
67.5°	2670.8	1815.8	1263.5	875.8	664.1	562.1	491.1	444.9
70°	1346.5	696.4	422.0	297.7	254.5	236.5	224.6	217.8
72.5°	395.2	264.0	219.2	193.8	178.4	167.5	160.5	157.2
75°	218.7	178.4	157.6	143.1	133.2	125.7	121.3	118.3
77.5°	150.6	129.7	119.3	109.8	101.9	96.4	93.0	89.9
80°	105.3	94.9	90.4	85.4	79.5	75.1	70.0	68.1
82.5°	70.0	65.7	64.6	60.6	57.2	52.2	43.2	40.2
85°	41.3	40.8	40.8	39.3	36.8	32.3	25.9	25.9
87.5°	14.4	14.9	15.4	16.4	16.0	13.4	10.9	10.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)